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EBOLA AND THE AIRPLANE – SECURING MOBILITY THROUGH REGIME INTERACTIONS AND LEGAL ADAPTATION

**** Gearóid Ó Cuinn and Stephanie Switzer**

ABSTRACT

This article concentrates on a particular controversy during the 2014 Ebola outbreak in West Africa; the mass cancellation of flights to and from affected countries. This occurred despite authoritative advice against such restrictions from the World Health Organisation (WHO). During a public health emergency such as Ebola, the airplane sits at a site of regulatory uncertainty as it falls within the scope of two specialist and overlapping domains of international law; the WHO International Health Regulations (2005) and the Convention on International Civil Aviation. We explore how legal technicalities and objects, by promoting functional interactions between these two specialised regimes of law, were utilised to deal with this uncertainty. We show how the form and function of these mundane tools had a significant impact; assimilating aviation further into the system of global health security as well as instrumentalising the aircraft as a tool of disease surveillance. This encounter of regimes was law creating, resulting in new international protocols and standards designed to enable the resumption of flights in and out of countries affected by outbreaks. This article therefore offers significant and original insights into the hidden work performed by legal techniques and tools in dealing with regime overlap. Our findings contribute to the wider international law literature on fragmentation and enrich our understanding of the significance of relational regime interactions in international law.

Keywords: Ebola, IHR, WHO, ICAO, global health, regime interactions

INTRODUCTION

The 2014/2015 Ebola outbreak claimed over 11,000 lives in West Africa,¹ and devastated Liberia, Guinea and Sierra Leone, the three most affected countries.² Its extraordinary nature prompted the UN Security Council to categorise it as a risk to international peace and security³ while the World Health Organisation (WHO), acting under the International Health Regulations⁴ (IHR 2005), declared it a Public Health Emergency of International Concern (PHEIC).⁵ The WHO also issued temporary recommendations⁶ that aimed to strike a balance between preventing the international spread of the disease, on the one hand, and avoiding ‘unnecessary interference with international traffic and trade’ on the other.⁷ The WHO IHR Emergency Committee advised against travel restrictions with the exception of Ebola cases and their contacts.⁸

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¹ WHO, ‘Ground zero in Guinea: the Ebola outbreak smoulders – undetected – for more than 3 months’, available at <http://www.who.int/csr/disease/ebola/ebola-6-months/guinea/en/>.

² UNICEF, ‘Impact of Ebola’, 21 July 2016, available at www.unicef.org/emergencies/ebola/75941_76129.html.

³ UNSC Resolution 2177 (2014) available at [www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2177%20\(2014\)](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2177%20(2014)).

⁴ World Health Assembly, Revision of the International Health Regulations, WHA58.3 (May 23, 2005) (hereinafter IHR (2005)).

⁵ WHO, ‘Statement on the 1st Meeting of the IHR Emergency Committee on the 2014 Ebola Outbreak in West Africa’, 8 August 2014, available www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/

⁶ Pursuant to IHR (2005), Art. 15.

⁷ IHR 2005, Art. 2.

⁸ WHO, *supra* note 5.

Despite recommendations from the WHO advising minimal travel restrictions to the Ebola affected countries, numerous airlines cancelled their services.⁹ A large number of countries also restricted flights to and from West Africa,¹⁰ with significant and immediate consequences for the affected area.¹¹ Nonetheless, by the time the PHEIC was eventually lifted by the WHO during March 2016,¹² several airlines opted to resume flights.¹³

Uncertainty and fear played a significant role in the cancellations. From a governance standpoint, the airplane occupies an unclear and fragmented legal space. It falls within the scope of two specialist and overlapping domains of international law; the WHO's IHR (2005) and the International Civil Aviation Organisation's (ICAO) Convention on International Civil Aviation, or the 'Chicago Convention' as it is more commonly known.¹⁴ While the emphasis of the Chicago Convention may be said to be on securing passenger safety, the IHR (2005) is premised upon protecting global health security through bolstering, among other things, surveillance.

We focus on the cancellation and subsequent resumption of flights during the Ebola outbreak. Much of the legal literature written in the aftermath of the Ebola outbreak has focused largely on the failure of the WHO/IHR (2005) to respond effectively to the

⁹ See discussion at section three, *infra*.

¹⁰ See Cohen et al., 'Travel and Border Health Measures to Prevent the International Spread of Ebola', *CDC*, 8 July 2016, available at www.cdc.gov/mmwr/volumes/65/su/su6503a9.htm.

¹¹ See generally T. Nierle and B. Jochum, 'Ebola: The Failures of the International Outbreak Response', *Medicins San Frontieres*, 27 August 2014, available at <http://www.msf.org/article/ebola-failures-international-outbreak-response>.

¹² WHO, Statement on the 9th meeting of the IHR Emergency Committee regarding the Ebola outbreak in West Africa', 29 March 2016, available at www.who.int/mediacentre/news/statements/2016/end-of-ebola-pheic/en/.

¹³ See generally B. Vickers and D. Games, 'The Ebola Crisis: Implications for trade and regional integration', *ICTSD*, 6 May 2015, available at <https://www.ictsd.org/bridges-news/bridges-africa/news/the-ebola-crisis-implications-for-trade-and-regional-integration>

¹⁴ International Civil Aviation Organization (ICAO), *Convention on Civil Aviation*, 7 December 1944, (1994) 15 U.N.T.S. 295 (hereinafter Chicago Convention).

outbreak.¹⁵ Our approach is different; we investigate how the international regimes applicable to public health and aviation co-functioned during the Ebola outbreak and the impact these interactions had on producing certainty and coherence in the governance of infectious disease in air travel. Our account moves beyond the traditional lens of conflict and litigation which has tended to dominate traditional legal accounts of regime interactions.¹⁶ We instead contribute to the growing literature on international law's 'relational interactions'¹⁷ - the ways in which distinct regimes of law collaborate and ensure coherence through practice.¹⁸

We demonstrate how ordinary legal tools and techniques – 'legal technicalities' – were deployed to harmonize the norms, actors and processes of each regime in responding to the threat of international spread of disease via air travel. While legal technicalities could be dismissed as the uninteresting tools of lawyers, this work adds to an emerging socio-legal scholarship inspired by the work of Annelise Riles¹⁹ and Mariana Valverde²⁰ which has shown how mundane legal tools exert their own agency, thereby making them worthy of greater attention.²¹ We engage with the role of law by being, as Valverde puts it, 'simultaneously inside and outside law, simultaneously technical and theoretical, legal and socio-legal.'²² In turn, we show how legal tools and artefacts facilitated what

¹⁵ See for example L. O. Gostin, 'Ebola: towards an International Health Systems Fund', (2014), available at <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2383&context=facpub>.

¹⁶ For discussion see J. L. Dunoff, 'A New Approach to Regime Interaction' in M. A. Young (ed), *Regime Interaction in International Law* (2012), 136.

¹⁷ See Dunoff, *Ibid*.

¹⁸ *Ibid.*, at 138.

¹⁹ See generally A. Riles, 'A New Agenda for the Cultural Study of Law: Taking on the Technicalities', (2005) 53 *Buffalo Law Review* 973.

²⁰ M. Valverde, 'Jurisdiction and Scale: Legal 'Technicalities' as Resources for Theory' (2009) 18 (2) *Social and Legal Studies* 139.

²¹ E. Cloatre, 'Shifting labels and the fluidity of the 'legal'', in D. Cowan and D. Wincott (eds), *Exploring the legal in socio-legal studies* (2015), 97 at 97.

²² See Valverde, *supra* note 20, at 153.

we term, the ‘socio-legal adaptation’ of the aircraft; a type of (re)ordering involving law, legal technicalities and artefacts of legal origin that in this case were focused on ensuring the compatibility of two distinct legal regimes.²³ Thus, socio-legal adaptation reflects a sociological research approach that is open to the complex entanglement of law and the material world, one that is strongly informed by the Actor-Network Theory rejection of explanations of the ‘the social’ which do not sufficiently account for the role of ‘non-humans’. In this guise, the socio-legal includes the material world and by extension ‘socio-legal adaptation’ should be understood as a re-ordering of the material and social worlds.

Our work is significant as it highlights the role played by legal technicalities in establishing ‘jurisdiction’²⁴ between specialised regimes of international law.²⁵ Furthermore, it demonstrates the assimilation of aviation into the cause global health security through the instrumentalisation of the aircraft and its crew as facilitators of disease surveillance. Through socio-legal adaptation, uncertainty was (somewhat) diminished and a more coherent governance framework was established for aviation in the context of the Ebola outbreak.

We commence our analysis in section one by detailing how the appearance of SARS (Severe Acute Respiratory Syndrome) in 2003 produced a paradigm shift in the relationship between aviation and public health. SARS spread to 23 countries in a

²³ Drawing on the concept of socio-legal objects, see E. Cloatre, ‘Trips and pharmaceutical patents in Djibouti: an ANT analysis of socio-legal objects’, (2008) 17 (2) *Social & Legal Studies* 263, at 263.

²⁴ See generally Valverde, *supra* note 20.

²⁵ See generally ILC Analytical Study 2006, ILC Study Group on the Fragmentation of International Law. Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law; Report of the Study Group of the International Law Commission, Finalized by Martti Koskenniemi. UN Doc A/CN.4/L.682 and Add.1 and Corr. 1. New York: International Law Commission, 2006..

matter of days through international air travel²⁶ and in one case it was thought that a single passenger infected 22 of 119 passengers.²⁷ We accompany this discussion by drawing attention to the literature on regime interactions, as well as the potential role of legal technicalities in facilitating coherent interactions between the legal regimes of aviation and global health security respectively.

In section two, we discuss in more detail the role of the technical in securing functional and coherent regime inter-operation. We demonstrate how over time, the legal regimes applicable to the aircraft became better aligned through the employ of artefacts and practices resulting in the social-legal adaptation of the airplane to the threat of communicable disease. This bridging work would, however, come to be tested during the Ebola outbreak.

In section three, we discuss the international response to Ebola and thereby reveal the struggle both within international organisations and the airline industry to contend with the disease. We explore socio-legal adaptations specific to Ebola, all of which aimed to further connect the plane's interior with disease surveillance systems.

In section four, we demonstrate that while legal technicalities can be written off as neutral and uninteresting, they played a significant role in facilitating the ongoing interaction between the applicable regimes of global health and aviation during the Ebola outbreak. Consequently, they were instrumental in developing international law's jurisdiction on-board the plane. Through efforts that included those facilitating regime

²⁶ See D. Fidler, *SARS: Governance and the Globalisation of Disease* (2004), Chapter 5. For further details on the role of international air travel in the spread of SARS, see WHO, *The World Health Report 2007 A Safer Future: Global Public Health Security in the 21st Century* (2007), at 38.

²⁷ Air Travel 'Fuelled SARS Spread' BBC NEWS (Dec. 17, 2003), <http://news.bbc.co.uk/2/hi/asia-pacific/3329483.stm>. See also *Ibid*.

interactions, some flights would take off during the outbreak. We conclude by drawing five core conclusions from our study.

1. REGIME INTERACTIONS, INTERLEGALITY AND LEGAL TOOLS

Airports are a physical manifestation of legal regime interoperation.²⁸ While parked on the runway, the plane exists within the bordered territory of a state and is subject to national laws relating to public health, customs, security and immigration. However, the plane and airport also fall within the scope of multiple international legal regimes including those of the Chicago Convention and IHR (2005). In this way, the airport and the plane are spaces where international norms and laws cohabit and interact with national and local laws and norms. For the air travel project to succeed and operate smoothly, a multitude of legal regimes must co-function.

The appearance of SARS highlighted the shortcomings of international law by exposing a gap in the interaction of the regimes of international health and international air travel.²⁹ The disease subsequently drove significant changes in the governance of air transport with respect to infectious diseases.³⁰ Indeed, such was the magnitude of the 2003 outbreak that it acted as a ‘tipping point’³¹ for the revision of the IHR (1969)³² which had been subject to extensive criticism for its inability to deal with new and emerging infectious diseases. Even with the revision of IHR in 2005, however, there was

²⁸ See generally A. Kesby, ‘The Shifting and Multiple Border and International Law’, (2007) 27 (1) *Oxford Journal of Legal Studies* 101.

²⁹ See *supra*, notes 26 and 27.

³⁰ *Ibid.*

³¹ S. E. Davies, A. Kamradt-Scott and S. Rushton, *Disease Diplomacy: International Norms and Global Health Security* (2015), Chapter two.

³² D. Fidler, ‘From International Sanitary Conventions to Global Health Security: The New International Health Regulations’, (2005) 4 (2) *Chinese Journal of International Law* 325, at 343.

still something of a 'gap' when it came to governing a crucial component of the aviation sector – the interior of the cabin and infected passengers. There were no prescriptions, for example, within the IHR (2005) or the Chicago Convention on the internal characteristics aircraft and the governance of infected passengers on the airplane.³³

From the perspective of the Chicago Convention, the ICAO's reaction to SARS was to recognise that, 'health issues are becoming a consideration for some in their decision to fly or not.'³⁴ In 2004, to ensure the mobility of planes during public health threats, the ICAO reviewed the compatibility of aviation standards with those of public health.³⁵ At that time, the Chicago Convention and the (as then draft) IHR (2005) were recognised to be 'generally synergistic, starting with their shared objective of avoiding unnecessary interference with, respectively, air transportation and international traffic.'³⁶ Despite this, a distinct normative gap between the rationalities underpinning the WHO IHR and

³³ It should be noted, however, that the ICAO and WHO had previously worked together on a diverse range of issues including quarantine, disinsectization of aircraft to eradicate vectors of disease, as well as airport health and sanitary facilities. Indeed, the IHR (1969), applicable at the time of SARS, contained a large number of references to aviation and international travel. The public health risks of international air travel were also given specific expression in Article 14 of the Chicago Convention. The extent of collaboration between the ICAO and WHO was such that the ICAO was the only intergovernmental organisation to participate in a 1995 informal WHO consultation on revision of the latter's International Health Regulations. Despite such cooperation, however, in the period before SARS, only limited progress was made in terms of regulating the interior of the aircraft to prevent the spread of communicable disease. See generally, L. C. S. Budd, M. Bell and T. Brown, 'Of Plagues, planes and politics: controlling the global spread of infectious diseases by air', (2009) 28 (7) *Political Geography* 426, at 429; B. J. Plotkin and A.M. Kimbal, 'Designing an International Policy and Legal Framework for the Control of Emerging Infectious Diseases: First Steps', (1997) 3 (1) *Emerging Infectious Disease* 1; R. Abeyratne 'International Responsibility in Preventing the Spread of Communicable Diseases Through Air Carriage – The SARS Crisis', (2003) 30 (53) *Transportation Law Journal* 53.

³⁴ The ICAO is a UN specialised agency, established by States in 1944 to manage the administration and governance of the Convention on International Civil Aviation (Chicago Convention). The quote is taken from the preamble to ICAO 2004 Resolution A35-12: Protection of the health of passengers and crews and prevention of the spread of communicable disease through international travel. On the economic impact of SARS for the airline industry, see R. Abeyratne, *Convention on International Civil Aviation: A Commentary* (2013) at 218 – 219.

³⁵ ICAO, *Ibid*.

³⁶ Review and Approval of Proposed Amendments to the International Health Regulations: Relations with Other International Instruments, WHO Doc. A/IHR/IGWG/INF.DOC./1, 30 September 2004, 1-10.

the Chicago Convention was apparent. While the two regimes certainly overlapped,³⁷ they had evolved largely in parallel, each operating through distinct personnel, norms and logics. Hence despite areas of convergence and overlap, they were, for the most part, spatially and functionally distinct.

On the one hand the IHR (2005) are concerned with global health security³⁸ through shoring up surveillance.³⁹ The IHR relies on the 'social sorting'⁴⁰ of the sick from the healthy and emphasises the importance of core capacities for 'disease surveillance and response.'⁴¹ This requires the development of 'generic capacities that will enable responses to a broad spectrum of contingencies'.⁴² With an emphasis on preparedness the IHR are concerned not so much with population health, but rather, 'imagining, anticipating, and rehearsing potential responses to emergent diseases that have the capacity to evade detection.'⁴³ Preparedness efforts are thus focused on protection of what Collier and Lakoff have referred to as 'vital systems' which includes the transport

³⁷ *Supra*, note 33.

³⁸ See WHO, 'Report of the Ebola Interim Assessment Panel - final report' (2015) www.who.int/csr/resources/publications/ebola/ebola-panel-report/en/, at 5; 'The International Health Regulations were revised a decade ago in order to better protect global health security – specifically, with the aim to prevent, protect against, control and respond to the international spread of disease while avoiding unnecessary interference with international traffic and trade.'

³⁹ Surveillance is defined in the IHR (2005), Art. 1.1, as, 'the systematic ongoing collection, collation and analysis of data for public health purposes and the timely dissemination of public health information for assessment and public health response as necessary.' For a critique of the surveillance function of the IHR, see generally G. Blouin Genest, 'World Health Organization and disease surveillance: Jeopardizing global public health?', (2015) 19 (6) *Health* 595.

⁴⁰ See K. Barker, 'Biosecurity: securing circulations from the microbe to the macrocosm', (2015) 181 (4) *The Geographical Journal* 357, at 358.

⁴¹ A. Lakoff, 'Two regimes of Global Health', (2010) 1 (1) *Humanity* 59, at 72.

⁴² A. Ingram, 'Biosecurity and the international response to HIV/AIDS', (2010) 42 (3) *Area* 293, at 296. See also A. Warren, M. Bell and L. Budd, 'Using event-based surveillance to manage emerging infectious disease' in K. Ball and L. Snider (eds.), *The Surveillance-Industrial Complex: A Political Economy of Surveillance* (2013), 47.

⁴³ N. Stephenson, 'Emerging Infectious Disease/Emerging forms of Biological Sovereignty' (2011) 36 *Science, Technology and Human Values* 616, 621.

sector.⁴⁴ This can be contrasted with the Chicago Convention which has traditionally focused on the prevention of accidents and ensuring passenger health and safety.⁴⁵ Prior to SARS, the ICAO was mostly interested in the 'human factors' dimension of aviation health⁴⁶ with, for example, efforts to ban smoking in-flight⁴⁷ derived from ICAO's passenger safety mandate.

In summary, we find two different legal regimes, while sharing the objective of maintaining international travel, are nevertheless epistemically distinct. This distinctiveness highlights a number of challenges which could give rise to governance issues including; functional overlap,⁴⁸ normative difference, and the potential for jurisdictional uncertainty.⁴⁹ With regards to the latter, for example, we can consider an in-flight incidence of infectious disease as an issue pertaining to international health security. In some circumstances, however, it will be a passenger safety concern.

⁴⁴ S. J. Collier and A. Lakoff, 'Vital Systems security' (2006) ARC Working Paper No. 2, 2 February 2006; cited in Stephenson, *Ibid.*, at 621 – 622. See also S. Opitz, 'Regulating the Epidemic Space: the nomos of global circulation', (2015) 19 (2) *Journal of International Relations and Development* 1, at 10, who argues that, 'the IHR contain no substantial allusion to individual health, the figure of the individual person who is sick and needs care is, for the most part, absent. On the other hand, and even more curiously, the IHR also refrain from concerning themselves with the health of the population...'

⁴⁵ The preamble to the Chicago Convention states that governments have agreed on 'principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner and that the international air transport services may be established on a basis of equality of opportunity.' See generally Abeyratne, *supra* note 34, at 217; commenting that in respect of the aviation context, 'international responsibility in the carriage of persons extends only as far as the obligation to prevent injury, wounding or death, and not to the physical or mental well-being of a person.'

⁴⁶ See generally International Civil Aviation Organization. Resolution A33-12: Harmonization of drug and alcohol testing programmes, 2001.

⁴⁷ International Civil Aviation Organization. Resolution A29-15: Smoking restrictions on international passenger flights. October 8, 1992.

⁴⁸ On this issue, it is clear that while 'treaty overlap indicates an engaged global community, it also creates problems of inefficiency, contradiction, lost opportunities, and sometimes even 'sclerosis.' S. Jinnah, *Post-Treaty Politics: Secretariat Influence in Global Environmental Governance* (2014), 5.

⁴⁹ See, for example, See ICAO/ A. Evans, 'Update on CAPSCA (Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation)', (2013) available at www.icao.int/MID/Documents/2013/capsca-mid3/Update%20on%20CAPSCA.pdf at 6.

Sometimes it will be both. It is therefore necessary to resolve how the two domains of law inter-operate.

1.1 Regime interoperation

The wide array of legal regimes governing specific issue areas, often with overlapping competences, has attracted much by way of academic comment.⁵⁰ The so-called fragmentation of international law is seen as a response to the increased specialisation and complexity of international affairs.⁵¹ Nonetheless there exists a general presumption against normative conflict in international law.⁵² This is given effect through techniques and agreements⁵³ aimed at ensuring harmonious legal interpretation and elaboration.

At the doctrinal level, rules such as *lex posterior* and *lex specialis* have been developed to minimise inter-systemic conflicts between different international treaties.⁵⁴ Such rules or techniques may, however, be unsuited to the task of dealing with 'relational interactions' between international regimes which exercise concurrent authority over actions or events.⁵⁵ In practice, when decision makers encounter regime conflicts, 'they tend to be resolved in ad hoc political bargains rather than by an application of

⁵⁰ See, for example, J Dunoff, 'The WTO in Transition: Of Constituents, Competence and Coherence' (2001) 33 *Geo Wash Int'lL Rev* 979; V Lowe, 'The Role of Law in International Politics', in M Byers (ed.), *The Politics of Law-Making: Are the Method and Character of Norm Creation Changing?* (OUP, 2000).

⁵¹ See, e.g. G. Abi-Saab, 'Fragmentation or Unification: Some Concluding Remarks' (1999) 31 *New York University Journal of International Law and Politics* 919.

⁵² See generally ILC Analytical Study, *supra* note 25.

⁵³ Vienna Convention on the Law of Treaties, United Nations Treaty Series 331 (May 23, 1969): 1155; Article 31 (3) (c).

⁵⁴ See generally N Krisch, *Beyond Constitutionalism: The Pluralist Structure of Postnational Law* (OUP, 2012) Chapter 8.

⁵⁵ Dunoff, *supra* note 16, at 138.

blackletter principles.’⁵⁶ Likewise the International Law Commission’s report on the fragmentation of international law highlighted the limits of public international law’s response to conflict, suggesting that this may at times be more a political task.⁵⁷ Johns, however, has challenged this view, pointing to the repertoire of tools and techniques deployed by international lawyers in this space.⁵⁸

Indeed international lawyers have begun to analyse, ‘the positive contribution of (...) new techniques which courts, tribunals, and other actors have developed in order to coordinate the various subfields of international law.’⁵⁹ Accordingly, an emerging scholarship on ‘relational regime interactions’ has demonstrated that far from being conflictual in nature, many regime differences are resolved cooperatively.⁶⁰ The pursuit of functional coherence between regimes does not, however, erode differences of norms, rationalities and authority between them. Rather, the focus of scholarship on relational regime interactions is the, ‘question of how different regimes and norms could work to support each other, or, in other words, how to achieve *synergies*.’⁶¹ For example, Fishcer-Lescano and Teubner, in drawing attention to regime interaction,

⁵⁶ C. J. Borgen, ‘Resolving treaty conflicts’, (2005) 37 9 (3) *The George Washington International Law Review*, 573, at 605.

⁵⁷ ILC Study, *supra* note 25, para. 488.

⁵⁸ F. Johns, *Non-Legality in International Law Unruly Law* (Cambridge University Press, 2013) 221.

⁵⁹ A. Peters, ‘The refinement of international law: From fragmentation to regime interaction and politicization’ (2017) 15 (3) *International Journal of Constitutional Law* 671, 672. See generally M. A. Young (ed), *Regime Interaction in International Law* (2012).

⁶⁰ See, for example H. van Asselt, ‘Managing the Fragmentation of International Environmental Law: Forests at the Intersection of the Climate and Biodiversity Regimes,’ (2012) 44 (4) *New York University Journal of International Law and Politics*, 1205. ‘Relational regime interactions’ derives from Dunoff, *supra* note 16, at 138.

⁶¹ van Asselt, *ibid*.

focus on the potential for an 'operative inter-legality', which may exist even in the absence of normative consistency.⁶²

D'Sousa Santos originally coined the term inter-legality to describe how different legal orders intersect but find coherence. This legal interplay is 'a highly dynamic process because the different legal spaces are non-synchronic and thus result in uneven and unstable mixings of legal codes.'⁶³ Regime interactions are part of the work that produces interlegality. Through this process, law's subjects, including communicable diseases, are formed at the intersection of different legal regimes. Their interactions establish and consolidate the scope of international law which in turn intersects with other legal orders, including at the national and local scale.

Interlegality, according to Valverde, is also a product of technical legal work, the invisible cooperation that also determines the where, the who, the what and the how of legal governance.⁶⁴ What makes a particular issue a matter for public health law or aviation law is, in turn, a product of separating and sorting legal orders, the legal machinery of jurisdiction. Valverde's reading of jurisdiction portrays inter-legality as a domino effect. Where domains of law overlap or are actively brought together,⁶⁵ their seemingly inevitable interoperation should be viewed as a product of deliberate technical legal governance.⁶⁶

⁶² A. Fischer-Lescano and G. Teubner, 'The Vain Search for Legal Unity in the Fragmentation of Global Law' (2004) 25 *Michigan Journal of International Law* 999, at 1007.

⁶³ B. de Sousa Santos, 'Law: A Map of Misreading. Toward a Postmodern Conception of Law', (1987) 14 (3) *Journal of Law and Society* 279, at 298.

⁶⁴ Valverde, *supra* note 20, at 144.

⁶⁵ see D. Burchardt, 'Intertwinement of Legal Spaces in the Transnational Legal Sphere', (2017) 30 (2) *Leiden Journal of International Law* 305. See generally, J. P. Trachtman, 'Institutional Linkage: Transcending "Trade and"', (2002) 96 *American Journal of International Law* 77, at 80 to the effect that, linkage between two regimes is effectively a 'problem of jurisdiction.'

⁶⁶ Valverde, *supra* note 20, at, 145.

To understand the workings or the machinery of jurisdiction Valverde suggests, 'turning-away from high theory and toward the 'technicalities' of law'.⁶⁷ Riles also helps us towards an analytical posture from where the mechanics of inter-treaty regime interactions can be appreciated and analyzed from a legal perspective. Her work illuminates the role of the technical, directing attention to the mundane tools of law.⁶⁸ According to Riles, legal technicalities are perceived as being, 'only a tool, nothing more, and can be used by anyone anywhere for any purpose.'⁶⁹ In this sense, legal technique is inherently practical; it is a 'series of problem-solving methods, as opposed to theories, a way of disposing of actual regulatory problems, or disputes, or legal puzzles.'⁷⁰ Because of this problem-solving focus, together with (the appearance at least of) political neutrality, legal technicalities are capable of being deployed regardless of their contextual setting. Furthermore, the obviousness of their function often means that lawyers fail to appreciate their importance.⁷¹

Riles suggests that legal technicalities include everything from legal actors, problem solving paradigms, ideologies, the form of technical legal doctrine and argumentation.⁷² Far from being inert, they often produce effects through material artefacts and practices.⁷³ Bringing such effects into view also allows us to see the potential of the

⁶⁷ Ibid., at 153.

⁶⁸ See generally Riles, *supra* note 19, at 975.

⁶⁹ A. Riles, *Collateral Knowledge: Legal Reasoning in the Global Financial Markets* (2011), Chapter One

⁷⁰ Ibid., 69

⁷¹ A. Riles, 'Afterword: A Method More Than a Subject?' in D. Cowan and D. Wincott (eds), *Exploring the legal in socio-legal studies* (2015), 257 at 259.

⁷² See Riles, *supra* note 19, at 976.

⁷³ See generally A. Riles, 'Models and Documents: Artifacts of International Legal Knowledge', (1999) 48 (4) *International and Comparative Law Quarterly* 805.

technical to act as a protagonist, not merely as a tool that faithfully mediates the intent of its user.⁷⁴

Rather than choosing between ‘ad hoc political bargains’ or the ‘application of blackletter principles’ to provide an account of the encounter of multiple treaty regimes, this study introduces the role played of legal technicalities. We examine how they feature in facilitating interactions between the legal regimes of aviation and global health security respectively. This untold story of international law – the role of the technical in securing coherent and synergistic regime interactions – contributes to the growing literature on relational regime interactions.

In the remainder of our paper, we use the term legal technicalities and legal tools interchangeably when in keeping with Riles’ definition. We refer to the materials that legal technicalities act through as legal artefacts; the quasi-legal objects or what Cloatre calls socio-legal objects.⁷⁵

2. A TALE OF THE TECHNICAL

As demonstrated above, SARS drew attention to uncertainty at the international level on how to deal with the threat of infectious disease spread by air travel. Responding to such concerns would require ‘bridging work’ between the applicable regimes. In this section, we discuss the form and function of such bridging work, paying particular attention to the role of the technical therein. As we will show, the legal technicalities employed to perform regime bridging work operated under a presumption of

⁷⁴ See Riles, *supra* note 19, at 985.

⁷⁵ Cloatre, *supra* note 23, at 263.

compatibility.⁷⁶ These technicalities included the doctrinal technique of instrumental cross-referencing⁷⁷ through to the use of institutional coordination linkages.⁷⁸ By dint of these legal tools, the governance of infected airline passengers could be progressively integrated into the existing legal orders.

As we elucidate below, the resulting interactions between the ICAO and WHO were juris-generative,⁷⁹ and resulted in the elaboration of ‘new international norms’⁸⁰ for air travel during public health emergencies.⁸¹ Accordingly, over time, the legal regimes applicable to the craft became better aligned through the development of artefacts and practices that resulted in the social-legal adaptation of the airplane to the threat of communicable disease. However, as we discuss in section three, this arrangement came under strain with the outbreak of Ebola in West Africa in 2014.

2.1 Close Encounters of a Regime Kind: Cross-referencing and coordination linkages

Cross-referencing may operate as a simple legal technique to ensure and promote the reconciliation of overlapping legal domains.⁸² In addition to bolstering coherence claims, cross-referencing may create a presumption of compatibility between the norms and policies of connected regimes.⁸³

⁷⁶ M. Savino, ‘Linkages between global regimes and interactions with civil society’ in S Cassesse (ed.) *Research Handbook on Global Administrative Law* (2016) Chapter six.

⁷⁷ L. Casini, ‘The Expansion of the material scope of global law’ in S Cassesse (ed.) *Research Handbook on Global Administrative Law* (Edward Elgar, 2016) 34.

⁷⁸ See Savino, *supra* note 76, at 138 – 140; see also Ibid., chapter one.

⁷⁹ This term is used by Dunoff, *supra* note 16.

⁸⁰ Ibid. See also J. L. Dunoff, ‘How to avoid regime collisions’, in Blome et al., (eds) *Contested Regime Collisions: Norm Fragmentation in World Society* (2016), 49 at 58.

⁸¹ See discussion at section four, *infra*.

⁸² Casini, *supra* note 77, chapter one.

⁸³ See generally Savino, *supra* note 76, chapter six.

In the aftermath of SARS, the legal technique of cross-referencing was utilised by the ICAO through its enactment of a series of updates to its Standards and Recommended Practices (SARPS)⁸⁴ under the Chicago Convention.⁸⁵ The updates referenced the IHR (2005)⁸⁶ and detailed, among other things, the need to bolster preparedness by establishing facilities at airports to contend with public health emergencies as well as to develop a National Health Plan to deal with such events.⁸⁷ These references to the IHR by the ICAO were mirrored by the extensive reference to aviation in the IHR (2005), providing implicit recognition of the normative and functional domain of the Chicago Convention and the ICAO.⁸⁸

In addition to cross-referencing, coordination linkages would play an important role in resolving potential frictions and ensuring operational coherence between the applicable regimes. From *ex ante* treaty provisions permitting multilateral coordination,⁸⁹ to

⁸⁴ Pursuant to ICAO, *supra* note 34, the ICAO Council requested that action be taken to, 'Review existing SARPs related to passenger and crew health and develop new SARPs where appropriate with due consideration of global health issues and recent developments in air transport operations.' All Contracting States should be urged 'to ensure the implementation of existing SARPs related to the health of passengers and crews.' Pandemic Influenza would also play a part in the expansion of the ICAO's role in mitigating the risk of infectious disease spread via air travel; see generally, ICAO, 'Postal History of the ICAO – ICAO and the World Health Organization', available at www.icao.int/secretariat/PostalHistory/icao_and_the_world_health_organization.htm

⁸⁵ Pursuant to Art. 37 of the Chicago Convention, the ICAO may adopt these measures for dealing with a range of issues including safety, regularity and efficiency. These are known as SARPS and are found in the Annexes to the Chicago Convention.

⁸⁶ See for example Chicago Convention, Ann. 9 Facilitation, Chapter 2.

⁸⁷ Chicago Convention, Ann. 6 Operation of Aircraft; Ann. 9 Facilitation; Ann. 11 Air Traffic Services; Ann. 14 Aerodromes; Ann. 18 The Safe Transport of Dangerous Goods by Air.

⁸⁸ Indeed, revisions to the General Declaration form were forwarded by the ICAO to the WHO with the latter considering the, 'document as part of its revision of the International Health Regulations,' see ICAO 'Working Paper – Assembly – 36th Session Executive Committee -Agenda Item 18: Passenger and crew health and the prevention of spread of communicable disease – Passenger and Crew Health and the Prevention of the Spread of Communicable Disease' (05.07.07) A36-WP/22; EX/2 available at www.icao.int/Meetings/AMC/MA/Assembly%2036th%20Session/wp022_en.pdf; at para 2.1.3.1.

⁸⁹ For example, Article 23 (4) h of the *Convention on Biological Diversity* (1992) 1760 UNTS 79, which charged the Convention of Parties with 'contact[ing], through the Secretariat, the executive bodies of Conventions dealing with matters covered by this Convention with a view to establishing appropriate forms of cooperation with them'.

informal configurations facilitated by memoranda of understanding or cooperation with different secretariats, treaty organs and international organisations, linkages feature heavily in the practice of regime interactions. They can be also considered as a discrete legal technique for the promotion of coherence in rules and implementation, and can, through the production of decisions, guidance and policies, involve an element of treaty interpretation.⁹⁰

In 2006, a decision was taken to establish a 'coordinating group' of representatives from, among others, the WHO, International Air Transport Association (IATA), Airports Council International (ACI) and the ICAO to keep the emergency guidelines for States up to date.⁹¹ This was followed with the development by the ICAO of the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA).⁹²

CAPSCA is tasked to enable 'cooperation amongst civil aviation authorities, public health authorities, airports, air traffic services, and airlines' to facilitate an international response to the spread of communicable diseases through air travel.⁹³ While not all ICAO Member States have joined CAPSCA,⁹⁴ part of its remit pertains to developing guidelines for states, airport authorities and airlines. In this sense, it performs the important function of 'overlap manager' between different domains of law.⁹⁵ In addition, it provides a 'coordination linkage' between the regimes of the IHR and the

⁹⁰ D. Leebron, 'Linkages,' (2002) 96 (1) *The American Journal of International Law* 5; H van Asselt, *supra* note 60.

⁹¹ ICAO *surpra* note 88; at para 2.1.3.2.

⁹² *Ibid.*, para 2.1.3.4.

⁹³ CAPSCA, 'Introduction', available at <http://www.capsca.org/IntroandObjectivesWeb.pdf>

⁹⁴ See CAPSCA/Ansa Jordaan, 'CAPSCA Future Developments', (3 October 2016) available at www.capsca.org/Meetings/Americas2016/D3-P5.pdf at 10.

⁹⁵ On overlap management more generally in international law, see Jinnah, *supra* note 48.

Chicago Convention and also helps secure the ongoing enrolment of the private airline industry into public health efforts. The IATA (a private sector organisation for the world's airlines), for example, published its own heavily cross-referenced versions of its operational standards therein. We can see this in its guidance for cabin crew in cases of suspected communicable disease, which advises that,

(a)s soon as possible, advise the captain of the situation because he/she is required by the International Civil Aviation Organization regulations (ICAO Annex 9, Chapter 8, and paragraph 8.15) and the World Health Organization International Health Regulations (WHO IHR 2005, Article 28(4)) to report the suspected case(s) to air traffic control.⁹⁶

Accordingly, we can begin to appreciate the result of cross-referencing and coordination linkages between the ICAO and the WHO; not only was the scenario of the infectious passenger integrated into the existing legal orders, but this approach was also embraced by the private sector. As we explore below, this would result in socio-legal adaptation of the aircraft interior to the threat of infectious disease, a process that reveals the juris-generative character of relational regime encounters.⁹⁷

2.2. The aircraft and socio-legal adaptation

As a consequence of the coordination linkages established between the ICAO, the WHO and the IATA, two modifications to the SARPs were enacted which are especially important to the adaptation of the airplane to communicable disease threats. The first

⁹⁶ IATA, 'Suspected Communicable Disease – Guidelines for Cabin Crew' (March 2015) available at www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cabin-crew.pdf, at para. 14.

⁹⁷ In this vein, see Dunoff, *supra* note 16, at 138.

was the creation of a 'Passenger Locator Form' in 2007,⁹⁸ followed by the development of a Universal Precaution Kit in 2009.⁹⁹ In respect of the Passenger Locator Form, 'adequate stocks' of the form were to be kept on-board aircrafts to enable the gathering of information on passengers' itineraries and contacts.¹⁰⁰ This would mean that airlines could avail of the form to assist in tracing exposed person(s), 'whenever they suspect a communicable disease on-board a flight.'¹⁰¹

Universal Precaution Kits were recommended for all aircraft for managing possible on-board communicable disease incidents.¹⁰² The kit was to contain essential equipment for crew members to safely deal with passengers displaying symptoms of communicable diseases listed in the IHR (2005). Included were personal protective equipment, absorbent powder to mop up fluids, germicidal disinfectant, biohazard disposal bags and a thermometer.¹⁰³

These developments also complemented the pre-existing mandate in Article 38 IHR (2005) which requires the airplane's crew to complete and submit, if required, information on, 'health conditions on board during an international voyage and any health measure applied to the aircraft.'¹⁰⁴ The declaration lists key symptoms associated with communicable disease transmission such as persistent coughing, impaired breathing, persistent diarrhoea, persistent vomiting and bleeding without previous injury. This notification process was intended to bring the aircraft within the IHR's

⁹⁸ Chicago Convention, Ann. 9, Appendix 13; Amendment 20 to Ann. 9 – *Facilitation*; for background on its introduction, see www.icao.int/Meetings/AMC/MA/Assembly%2036th%20Session/wp022_en.pdf.

⁹⁹ Ibid., Ann. 6

¹⁰⁰ Ibid., Ann. 9 which states: 'It is suggested that States make available adequate stocks of the Passenger Locator Form, for use at their international airports and for distribution to aircraft operators, for completion by passengers and crew.'

¹⁰¹ Available at www.icao.int/Meetings/FALP/Documents/Falp7-2012/IP10/IP10.EN.pdf.

¹⁰² Chicago Convention, Ann. 6, Chapter 6.2.2

¹⁰³ Chicago Convention, Ann. 6, Chapter 6.2.2; Attachment B, 2.2.

¹⁰⁴ Ibid. Ann. 9.

surveillance infrastructure by acting as a sentinel¹⁰⁵ for national public health authorities to activate a response.

While the role of the Declaration form was clear, airline crew required direction on how to manage the Passenger Locator Form and the Universal Precaution Kit. The IATA would prove instrumental in this regard, recognising that cabin crew are not medically qualified and providing guidelines on how to deal in-flight with passengers demonstrating the symptoms listed in the IHR (2005).¹⁰⁶ In fifteen steps, the IATA set out how symptomatic passengers should be isolated, designated a lavatory, and advised on 'respiratory etiquette.'¹⁰⁷ Instructions were also provided on using the contents of the Universal Precaution Kit including an impermeable apron to prevent contact with bodily fluids. Lastly, the IATA guidance provided details on contact tracing, advising that all adjacent passengers be asked to complete a Passenger Locator Form and air traffic control notified so that the public health authority at destination can be alerted in accordance with IHR (2005).¹⁰⁸

The IATA guidance was shaped by the materiality and architecture of the plane as only, 'travellers seated in the same row, 2 rows in front and 2 rows behind the sick traveller

¹⁰⁵ See generally A. Lakoff, 'Real-time biopolitics: The actuary and the sentinel in global public health', (2015) 44 (1) *Economy and Society* 40, 41.

¹⁰⁶ The IATA has been active in this domain since 2005; see N. P. Dowdall, A. D. Evans and C. Thibeault, 'Air Travel and TB: An Airline Perspective', (2010) 8 (2) *Travel Medicine and Infectious Disease* 96, 100 - and has updated its guidance periodically; see International Air Transport Association (IATA), 'Suspected Communicable Disease-Health Guidelines for Cabin Crew', (2011) available at <https://web.archive.org/web/20130517130342/http://www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cabin-crew-2011.pdf> and most recent guidance available here; IATA, *supra* note 96.

¹⁰⁷ E.g. 'Store soiled items (used tissues, face masks, oxygen mask and tubing, linen, pillows, blankets, seat pocket items, etc.) in a biohazard bag.'

¹⁰⁸ IHR (2005), Art. 28.6

[were] to complete a passenger locator card.¹⁰⁹ While cabin air is recirculated, it is also filtered to reduce the risk of disease spread.¹¹⁰ The downward flow of filtered air created by a standard ventilation system invisibly segregates symptomatic passengers so that the Passenger Locator Form was only required in a two seat radius of the symptomatic passenger.¹¹¹ Through these interactions, new boundaries for sorting and segregating were established with the guidance positioning materials and practices around bodily fluids. As a result, the interior of the aircraft became progressively engaged with the IHR (2005) and its surveillance processes.

The above socio-legal adaption not only linked two seemingly distinct legal domains but also further enrolled the private sector via the IATA. The legal 'fault lines' of this cooperation were, however, apparent. As the IATA made clear, '(t)he development and execution of measures to combat public health emergencies are the responsibility of states through their public health authorities, not airlines.'¹¹² Hence, while the IATA participated in CAPSCA and the development of the Passenger Locator Form it nevertheless 'always considered (the Passenger Locator Form) to be an interim measure that should eventually be replaced by an electronic method under the responsibility of public health authorities.'¹¹³ Despite this pushback, the significance of the involvement of the private sector in disease surveillance cannot be underestimated.

¹⁰⁹ IATA, 'Suspected Communicable Disease – Guidelines for Cabin Crew (March 2015) available at www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cabin-crew.pdf

¹¹⁰ WHO, 'Tuberculosis and Air Travel: Guidelines for Prevention and Control: Cabin Air Quality' (2008), available at www.ncbi.nlm.nih.gov/books/NBK143720/.

¹¹¹ See ECDC, 'Risk Assessment Guidelines for Diseases Transmitted on Aircraft' (2009) https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/1012_GUI_RAGIDA_2.pdf.

¹¹² IATA, 'IATA Guidance Note on Ebola' (August 2015) <https://www.iata.org/whatwedo/safety/health/Documents/ebola-comm-0815.pdf>

¹¹³ Airsan, 'Contact Tracing – Collaboration between the Public Health and the Aviation Sector' (May 2015) [http://www.airsan.eu/Portals/0/docs/AIRSAN_Guidance%20Document%20Contact%20Tracing_May2015.p](http://www.airsan.eu/Portals/0/docs/AIRSAN_Guidance%20Document%20Contact%20Tracing_May2015.pdf)df at 11.

Accordingly, the combination of these seemingly mundane legal tools and practices has led to, ‘fundamental epistemological shifts’¹¹⁴ whereby the rationalities underpinning the system of global health security are increasingly being de-territorialised and applied to aviation. As such, this demonstrates how the ‘global binary’ whereby health security is separated from other fields is diminishing,¹¹⁵ as a wider array actors are assimilated into the field of global health security.¹¹⁶

2.3 Summations

Cross referencing and coordination linkages between the legal regimes of the WHO, ICAO and IATA and others led to the development of materials, procedures and processes which in themselves performed bridging work between the relevant regimes. This facilitated the socio-legal adaptation of the aircraft; namely, the import of protocols and the Universal Precaution Kit into the aircraft cabin. These socio-legal objects assisted in the constitution of international law’s jurisdiction; that is, the operation of different legal regimes and their boundaries.¹¹⁷ Among other things, this helped to resolve how surveillance (IHR) and safety (ICAO) efforts could co-exist. Under this, the IHR was hierarchically superior in that its emphasis on preparedness and surveillance drove these relational interactions. However, such hierarchy was informal in that the norms from one regime – that of the WHO/IHR – were implemented through the receiving regime – the ICAO/Chicago Convention. It was, for example, the ICAO which

¹¹⁴ Riles, *supra* note 19, 986.

¹¹⁵ See generally Stephenson, *supra* note 43, at 627 – 628.

¹¹⁶ *Ibid.*, at 630.

¹¹⁷ See generally Valverde, *supra* note 20, at 141.

pushed for the development of CAPSCA to increase collaboration between various actors concerned with the overlap of public health and aviation.¹¹⁸

Finally, while these socio-legal adaptations were largely intended to adapt the aircraft to the rationalities of global health security,¹¹⁹ the arrangements were at best a work in progress with CAPSCA a long way off having all contracting States of the ICAO as members.¹²⁰ However, it is also the case that without the uneasy alignment of extended networks, the generic plane might struggle to operate during an infectious disease outbreak. Indeed, as Latour remarked on the extended nature of networks, 'Boeing 747s do not fly, airlines fly.'¹²¹ We will now examine the impact of Ebola on these socio-legal adaptations to understand how they held up during an actual outbreak.

3. EBOLA SOCIO-LEGAL ADAPTATION

Following the declaration of the Ebola outbreak as a PHEIC, the WHO advised against general travel restrictions. A large number of WHO member states nevertheless ignored this advice and instituted their own travel and trade measures.¹²² These were accompanied by a slew of cancellations by global and regional airlines such as Air Côte

¹¹⁸ Of practical import is that the ICAO questioned in July 2014 why the WHO had not declared a PHEIC; 'Concern was expressed that WHO has not yet established an Ebola IHR Emergency Committee and that it has not been designated a Public Health Emergency of International Concern...'; CAPSCA, 'Report on the Fifth Regional Meeting of the Collaborative Arrangement for the Prevention of Public Health Events in Civil Aviation (CAPSCA - Africa)' (2014), para 4.

¹¹⁹ Indeed, 'Contracting States shall comply with the pertinent provisions of the current edition of the International Health Regulations of the World Health Organization'; Chicago Convention, Ann. 9, Provision 8.12.

¹²⁰ CAPSCA/Ansa Jordaan, 'CAPSCA Future Developments' (3 October 2016) available at www.capsca.org/Meetings/Americas2016/D3-P5.pdf

¹²¹ B Latour, *Pandora's Hope* (1999), 193.

¹²² WHO, 'Statement of the 3rd Meeting of the IHR Emergency Committee on the 2014 Ebola Outbreak in West Africa', (26 October 2014) available at www.who.int/mediacentre/news/statements/2014/ebola-3rd-ihr-meeting/en/.

d'Ivoire, Arik Air, Air France, British Airways, Emirates Airlines, and Kenya Airways, resulting in a 64% decreased in scheduled flights to the Ebola affected countries.¹²³ In response, the WHO advised that '(f)light cancellations and other travel restrictions ... [are] resulting in detrimental economic consequences, and hinder relief and response efforts risking further international spread.'¹²⁴ Air travel restrictions in particular 'impeded recruitment and return of international responders'¹²⁵ and could prompt 'uncontrolled migration;' the movement of people beyond the reach of the global surveillance framework.¹²⁶

Press releases issued by airline carriers revealed the flights were primarily cancelled for two reasons; pressure from unaffected states and, secondly, concern for passenger and crew safety. According to British Airways '[t]he safety of our customers, crew and ground teams is always our top priority.'¹²⁷ While its decision to cancel flights was thought to be unilateral,¹²⁸ it was likely taken following indications from the UK's Department for Transport that permission to fly routes connected to the Ebola outbreak

¹²³ M. Anderson, 'Ebola: Airlines cancel more flights to affected countries,' *The Guardian*, 22 August 2014, at 5; see also J. Amankwah-Amoah, 'Ebola and Global Airline Business: An Integrated Framework of Companies; Responses to Adverse Environmental Shock', (2016) 58 (5) *Thunderbird International Business Review* 385, at 391.

¹²⁴ WHO 'Statement of the 2nd Meeting of the IHR Emergency Committee on the 2014 Ebola Outbreak in West Africa', (22 September 2014) available at www.who.int/mediacentre/news/statements/2014/ebola-2nd-ihr-meeting/en/.

¹²⁵ WHO, 'Statement of the 4th Meeting of the IHR Emergency Committee on the 2014 Ebola Outbreak in West Africa', (21 January 2015) available at <http://www.who.int/mediacentre/news/statements/2015/ebola-4th-ihr-meeting/en/>.

¹²⁶ WHO, 'Statement of the 3rd Meeting of the IHR Emergency Committee', *supra* note 122.

¹²⁷ ITV 'BA suspends Sierra Leone and Liberia flights over Ebola', 5 August 2014, available at www.itv.com/news/update/2014-08-05/ba-suspends-sierre-leone-and-liberia-flights-over-ebola/.

¹²⁸ Stephen Phillips MP (Sleaford and North Hykeham) (Con) (5 November 2014) Col 940, Hansard; available at www.publications.parliament.uk/pa/cm201415/cmhansrd/cm141105/debtext/141105-0004.htm.

would be revoked.¹²⁹ Air France received directions from Paris requesting them to end their services to the countries affected by Ebola, and the airline's staff also signed a petition calling on their employer to avoid Ebola-hit countries for their own safety.¹³⁰ Emirates airline cancelled flights stating that 'the safety of our passengers and crew is of the highest priority and will not be compromised.'¹³¹

Aircrew clearly played a key role in highlighting the risk of inflight transmission. They saw existing standards; the socio-legal adaptations described above, as being insufficient and lacking in detail. The US Association of Flight Attendants, for instance, lobbied federal aviation authorities to adopt a more defined check-list for the safety of their members.¹³² In other words, they were pushing for certainty. The proposed procedures built on the standards developed through CAPSCA and added extra-steps for handling IHR reporting obligations, on-board containment of infected passenger, and additional safety precautions. Put plainly, in the search for clear guidance on how to deal with an infected passenger, flight attendants looked to the legal adaptations of CAPSCA. These were then developed to provide greater certainty for those at the frontline of infection.

Would further socio-legal adaptation of the aircraft, manifesting as procedures or checklists, facilitate the resumption of flights? A small number of airlines maintained

¹²⁹ M. Lefty, 'We owe it to Sierra Leone, and ourselves, to re-establish links', *The Independent*, 25 February 2015, available at www.independent.co.uk/news/business/comment/mark-lefty-we-owe-it-to-sierra-leone-and-ourselves-to-re-establish-links-10068356.html.

¹³⁰ 'Air France staff refuse to fly to west Africa amid fears of Ebola outbreak', *RTE News*, 20 August 2014, available at www.rte.ie/news/2014/0820/638337-air-france/.

¹³¹ H. Martin, 'Emirates Airlines suspends flights to Guinea after Ebola outbreak', *Los Angeles Times*, 4 August 2014, available at www.latimes.com/business/la-fi-emirates-flights-ebola-20140804-story.html

¹³² Association of Flight Attendants, 'Flight Attendant Union Issues Ebola Protection and Response Checklist' available at <http://www.afacwa.org/flight-attendant-union-issues-ebola-protection-and-response-checklist>

their operations or recommenced flights in the midst of the outbreak following a brief suspension.¹³³ While unaffected states were clearly averse to Ebola spread via air travel, these airlines built on standards developed through CAPSCA. An EU technical inspection mission to Liberia, Sierra Leone and Guinea, for example, found that ‘a number of airlines have introduced additional temperature checks and hand out forms which they process under their own responsibility.’¹³⁴ Belgian Airlines relocated their crew to overnight stays in jurisdictions without Ebola while thermoscanning equipment was used to monitor any passengers showing signs of illness after take-off.¹³⁵ Clearly Ebola triggered some new ad hoc developments building on existing procedures developed via CAPSCA with the aim of resuming or maintain flights.

Further energy was invested at the international level in persuading private operators to resume flying to the affected States. The ICAO approached individual airlines to establish the ‘conditions necessary for the resumption of services.’¹³⁶ The ICAO, WHO and the IATA also indicated to states that ‘revisions to the WHO document on travel and transport’ would be considered.¹³⁷ The WHO advised States to keep working ‘with the airlines to facilitate and harmonise communications and management regarding symptomatic passengers under the IHR (2005) mechanisms for contact tracing.’¹³⁸

¹³³ See generally Amankwah-Amoah, *supra* note 123.

¹³⁴ EU/ WHO, ‘Mission to Review the Exit Screening Measures at International Airports in Conakry, Freetown and Monrovia Summary Technical Report http://ec.europa.eu/health/preparedness_response/docs/ebola_20141208_sum_technicalreport_screening_en.pdf

¹³⁵ B. Kennedy, ‘British Airways Suspends some flights due to Ebola Concerns’, *CBC News*, 5 August 2014, available at www.cbsnews.com/news/british-airways-suspends-some-flights-due-to-ebola-concerns/

¹³⁶ ICAO/WHO ‘Ebola Virus Disease Outbreak – Aviation Action Plan’, October 2014, available at www.capsca.org/Documentation/Ebola/WHO-ICAOWorldHealthOrganizationCollaborationonEbola.pdf

¹³⁷ ICAO, ‘ICAO and World Health Organization Collaboration on Ebola’, 30 July 2014, available at www.icao.int/Newsroom/Pages/ICAOWorldHealthOrganizationCollaborationonEbola-outbreak.aspx

¹³⁸ WHO, *supra* note 5.

Clearly further socio-legal adaptation of aircraft was being considered with the goal of resuming flights. This would once again rely on the technical work of regime interactions bridging the ICAO and the IHR.

3.1 Ebola, Regime Interactions, Legal Technicalities, and the Plane

Following the Ebola outbreak being declared as a PHEIC, the WHO issued guidance that airline crew should 'be appropriately trained and medical and universal precaution kits for managing Ebola cases should be available on board.'¹³⁹ Such training would ensure the forms, kits and other artefacts of regime interaction would be properly deployed and choreographed to maximise safety. Two months later, another new socio-legal adaptation appeared in response to Ebola. As with other standards applicable to the plane's interior, it was jointly developed through coordination linkages between the WHO, ICAO, IATA and the Airports Council International (ACI).¹⁴⁰ The document was labelled as the 'Traveller Public Health Declaration Form.'¹⁴¹

This form asked travellers to self-report any symptoms experienced within the past 48 hours, or Ebola exposure during the past 21 days. This information would be passed to authorities to target their screening efforts and augment their ability to trace passengers should an infection manifest at a later point. It could co-function alongside

¹³⁹ WHO, 'WHO Interim Guidance for Ebola Event Management at Points of Entry', September 2014, available at http://www.euro.who.int/__data/assets/pdf_file/0007/268792/WHO-Interim-Guidance-for-Ebola-Event-Management-at-Points-of-Entry-Eng.pdf, at 7.

¹⁴⁰ CAPSCA, 'List of Conclusions of the 5th CAPSCA Global Coordination Meeting (Cairo, Egypt, 17 - 20 November 2014)' (2014) available at www.icao.int/MID/Documents/2014/CAPSCA%20MID4/CAPSCAconclusionsRev5AE.pdf, at 2.

¹⁴¹ 'Traveller Public Health Declaration' available at www.capsca.org/Documentation/Ebola/TravelerHealthDeclarationForm21Oct2014.pdf.

the IHR's less specific health part of the Aircraft 'General Declaration'¹⁴² which was to be used notify destination states when a suspected case of infection manifested in-flight.

Where adopted, the 'Traveller Public Health Declaration Form' replicated some aspects, but did not replace, the previously discussed Passenger Locator Card Form (PLF). This new document requested personal details, flight and seat number but, in contrast to the PLF, it operated without the need for a suspected case of infection on board and the plane did not have to depart from a state affected by an outbreak. Now the mere existence of an outbreak and/or the declaration of a PHEIC would be sufficient to deploy the Traveller Public Health Declaration Form, even if the affected area was not connected to the flight path. Lowering the threshold for gathering passenger data meant that airlines could more readily respond to the risk transmission through air travel while reassuring destination states that connecting flights would not constitute a gap in surveillance.

Guidance accompanying the Traveller Public Health Declaration Form recommended it be completed and 'reviewed prior to clearance to board' or before passengers left the plane. To ensure this happened, the IATA developed a 'script to be read by cabin crew to passengers prior to arrival';¹⁴³

¹⁴² Indeed, in the context of the 2014 EVD outbreak, it was noted by the WHO that the General Declaration of aircraft health form could be requested of all arriving aircraft 'arriving from EVD-affected areas and for aircraft carrying ill travellers suspected of having EVD' meaning the pilot would have to notify Air Traffic Control about any suspected cases of communicable disease on-board before arrival; see WHO, 'Technical note for Ebola virus disease preparedness planning for entry screening at airports, ports and land crossings', (December 2014) available at http://apps.who.int/iris/bitstream/10665/144819/1/WHO_EVD_Guidance_PoE_14.3_eng.pdf, para 3.1.

¹⁴³ IATA, 'Suspected Communicable Disease – Script to be Read by Cabin Crew to Passengers Prior to Arrival', (October 2014) available at www.iata.org/whatwedo/safety/health/Documents/health-guidelines-cabin-annoucement-scripts.pdf; and CAPSCA, *supra* note 140.

Ladies and gentlemen, Actions have been put in place by public health authorities in response to the ongoing outbreak of Ebola (...) Public health authorities require that all travellers (sic) complete a health declaration form before arrival ... Every traveler (sic) must complete a form. (...) This is required as a precautionary measure even if you are feeling well.

Together this form and script illustrate the deepening enrolment of private sector airlines into the IHR surveillance network. It also represents a move towards securing complete public health data from all passengers, a development which triggered alarm bells with airline companies. During the Ebola outbreak, calls for greater data sharing to facilitate the effective tracing of passengers included the proposed automated sharing of passenger data. At the height of the outbreak US Customs and Border Protection shared 21 Passenger Name Records (PNR) with the US Centre for Disease Control (CDC)¹⁴⁴ while the UK, 'also demanded the information from a handful of airlines to identify people travelling from areas hit by Ebola [so as to] target them for screening.'¹⁴⁵ PNR data is information provided by passengers and automatically collected by air carriers during reservation and check-in procedures. It includes information, such as travel dates, travel itinerary, ticket information, and contact details.¹⁴⁶

¹⁴⁴ European Commission, Commission Staff Working Document {COM(2017) 29 final} (19.1. 2017) SWD(2017) 14 final, at 26.

¹⁴⁵ See M. Holehouse, 'David Cameron says Europe's block on sharing passenger data is 'frankly ridiculous', The Telegraph, 18 December 2014, available at www.telegraph.co.uk/news/politics/david-cameron/11302567/David-Cameron-says-Europes-block-on-sharing-passenger-data-is-frankly-ridiculous.html.

¹⁴⁶ ICAO, 'Guidelines on Passenger Name Record (PNR) Data', Document 9944 (2010) available at www.iata.org/iata/passenger-data-toolkit/assets/doc_library/04-pnr/New%20Doc%209944%201st%20Edition%20PNR.pdf.

The airline industry was implacably against the burden of PNR data sharing with the IATA advising that, 'States should be discouraged from implementing disproportionate and unworkable new passenger data requirements'.¹⁴⁷ The IATA presented the proposed measure as a travel restriction with the potential for producing undesirable outcomes for surveillance and public health,

(A)s States start indicating their intent to control passenger movements via provision of PNR, those seeking to flee Ebola affected States will actively evolve their strategies. They will start booking separate tickets (i.e. Western Africa to a European transfer hub and then a separate reservation from that EU hub onward). In those cases – the PNR will not show the true origin and the carrier boarding the person at the EU hub will have no access to up-line data. We therefore believe that such passenger data requirements are invariably disproportionate to the potential benefits they could derive.¹⁴⁸

Companies with passenger data processed in the EU, it was claimed, would be legally prohibited from providing PNR data to third countries without a specific data protection agreement in place.¹⁴⁹ Moreover, data transfer would typically be restricted to a case-by-case basis.¹⁵⁰ In this context, the Traveller Public Health Declaration Form can be understood as a substitute for PNR data sharing, a confessional space for the passenger to provide all of the data needed for effective contact tracing.¹⁵¹ It could capture data on journeys with multiple flights and not just those coming directly from countries enduring an outbreak by asking passengers to,

¹⁴⁷ IATA, *supra* note 112, at 2.

¹⁴⁸ See *Ibid.*

¹⁴⁹ *Ibid.*, at 3.

¹⁵⁰ *Ibid.* See also European Commission, *supra* note 144, at 25 – 26.

¹⁵¹ In this sense, the form is concerned with the 'sins of the flesh', in contrast to thermoscanning which desires to know the 'sins by the flesh'; see discussion Opitz, *supra* note 44, at 12.

List all countries where you have been in the past 21 days (including airports and port transits and where you live). List the most recent country first (where you boarded). If you need more space use the back of the page.

It could also speak to the concerns of those countries pushing for flight cancellations, entry screening or additional PNR sharing by capturing relevant information without the burden of managing the transnational sharing of passenger data. Furthermore, unlike PNR data,¹⁵² this form was better adapted to capturing passengers changing seats mid-flight, thereby assisting better contract tracing and surveillance.

The Traveller Public Health Declaration Form is an example of socio-legal adaptation prompted by the Ebola outbreak. It emerged from the relational space of CAPSCA and embodied the bridging work between the norms and actors of two legal regimes. Their reconciliation involved socio-legal adaptations explicitly directed at improving safety (Chicago Convention) but also deepening surveillance measures (IHR). The practice of regime interaction also reveals the role played by private air carriers as transnational implementers of public health and aviation norms as well as their progressive incorporation into global surveillance networks.

3.2 Summations

The complex arrangements discussed above required an uneasy alliance between many different actors working through the multilateral space of CAPSCA. As a collaborative arrangement, CAPSCA came into existence as a response to legal diversity and specialisation. All actors engaged in this space were united through problem-driven governance toward the shared goal of the mobility of the aircraft during an outbreak of

¹⁵² See ICAO, 'Guidelines on Passenger Name Record (PNR) Data, *supra* note 146.

infectious disease. While rooted in compromise, this did not mean that the norms, rationalities or obligations of the IHR, the Chicago Convention, and the private sector regimes would automatically co-function. Even with the changes articulated above, not all private sector operators recommenced flights. In other words, while efforts such as the Traveller Public Health Declaration Form were representative of attempts to facilitate regime interoperation, there was contingency to such efforts. Nevertheless, they provide a snapshot of the use of legal tools and artefacts to facilitate regime interaction; a cumulative process with its origins in the SARS outbreak.

4. TRANSLATIONS

Infectious disease can be a fearsome teacher and the events of SARS brought attention to how globalised travel can hasten the spread of disease internationally. It also highlighted the existence of a regime 'gap' as the regimes of global public health and aviation provided insufficient guidance on how the generic infected passenger should be governed. Efforts after SARS to close that gap are still ongoing and the 2014 Ebola outbreak in West Africa provided a further punctuation point to these processes.

The existence of a gap between the Chicago Convention and the IHR was not an instance of conflict within international law. At the doctrinal level, there are rules of the conflict of laws aimed at minimising or avoiding intra-systemic conflicts between different international treaties using rules to assert jurisdictional hierarchy, e.g. *lex specialis*. These would not, however, have addressed the regime overlap at play when dealing with infectious disease spread via air travel. What was required instead was a synergistic and coherent response aimed at addressing a common concern; that of ensuring the mobility of the airplane during an infectious disease outbreak.

The fragmentation of international law leads to questions of how different regimes avoid and resolve conflict as well as how they interact to address issues of common concern. Scholarship on relational interactions has acknowledged that particular regimes can 'exercise concurrent authority over actions or events' and hence, are often focused on 'the articulation of new international norms to prospectively govern behaviour within a particular area of international relations.'¹⁵³ Here, quite clearly, we are dealing with a similar concern; two regimes with concurrent authority over a particular issue. What our study revealed was the importance of legal technicalities in this process.

This technical work, designed to facilitate regime interoperation, provided scaffolding for regime bridging work at particular legal scales. Ebola, for instance, was classified as being of 'international concern', resulting in the IHR and Chicago interacting to provide detailed standards for this international scale. At the same time, Ebola can be interpreted through a more local legal scale, such as the health and safety concern for particular airline crew or public health risk at the national level in unaffected states. Rather than looking into how these local, national and international scales are sorted, flight cancellations exposed the struggle of the international legal regime to even feature in this aspect of the governance of communicable disease outbreaks.

Technical bridging work, including socio-legal adaptation of the aircraft, was hence a process of articulation for the international scale. How should two international legal regimes fit together to speak coherently and enable the speaking of international law, or international juris-diction? As a result, regime interactions focused on bringing the IHR and the Chicago Convention together but their integration would also need worked out

¹⁵³ Dunoff, *supra* note 16, at 138.

in the concrete situation of the flight. Eventually, increasingly clear international guidance for 'international air transport' would emerge from the shadow of Ebola. Take for instance this interim guidance from the WHO stating that;

National public health authorities should coordinate with aircraft and airport operators and ensure that Passenger Locator Forms are available in flight and/or at destination airports. Airport personnel and cabin crew should be appropriately trained for managing EVD cases/contacts, and medical and universal precaution kits should be available on board, in accordance with International Civil Aviation Organization (ICAO) guidelines.¹⁵⁴

Essentially, we see the two regimes interoperating through a choreography managed by air crew. Training and guidance indicated when to use safety kits (Chicago Convention) and when to deploy surveillance tools (IHR). We saw with Ebola that further technical work was required, resulting in the creation of additional legal artefacts such as the Traveller Public Health Declaration Form. Our study suggests that these adaptations played a significant role in translating rationalities of international law into the 'lower level' legal scale and procedures of managing airline travel and passengers. With a more coherent framework, these quasi-legal objects and procedures could facilitate international law gaining more 'bite' in decision-making around flight cancellations by national and private-sector actors.

Promoting international law in the response to Ebola is what Valverde would call jurisdiction; an intervention in the sorting process determining which legal scale applies

¹⁵⁴ WHO, 'Interim Guidance: Travel and Transport Risk Assessment', (September 2014) available at URL http://apps.who.int/iris/bitstream/10665/132168/1/WHO_EVD_Guidance_TravelTransportRisk_14.1_eng.pdf, at 6.

when (and how).¹⁵⁵ Technical work to adapt, modify and translate international law into a suite of procedures, forms and kits aimed to encourage flights to continue during the Ebola outbreak. Understanding regime interactions in this way helps us to appreciate the hidden technical legal work that forms part of a complex response of global health security.

Accordingly, while legal technicalities can be written off as neutral and unworthy of further attention, they played a significant role in defining international law's jurisdiction and in facilitating the ongoing interaction between the applicable regimes. The resultant regime interactions did not of course produce full compliance with the WHO's recommendations; not all flights recommenced and, as we saw, there was also pushback by the private sector. However, it is also clear that the ongoing interactions between the applicable regimes helped facilitate an increasingly coherent set of standards for supporting the goals of global health security.

5. CONCLUSIONS

Much has been written on the international response to the Ebola outbreak in West Africa with a particular focus on the ineffectiveness of the WHO response.¹⁵⁶ We have not wished to supplement this already comprehensive literature. Our study was prompted by an interest in the cancellation of flights to the affected region despite an authoritative consensus to the contrary. While there has been some work looking at how best to hold to account states which enact disproportionate trade and travel

¹⁵⁵ Valverde, *supra* note 20.

¹⁵⁶ See, for example, S. Moon et al., 'Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard LSHTM Independent Panel on the Global Response to Ebola', (2015) 386 (10009) *The Lancet* 2204.

restrictions during PHEIC,¹⁵⁷ there has been scant scrutiny of the processes that operated to facilitate compliance and, in this case, the resumption of flights. The interactions between public health and aviation regimes have also attracted little attention. Despite a growing socio-legal scholarship on the role of legal technicalities in public health, no comprehensive study has yet been undertaken on the importance of legal technicalities in securing regime interoperation in this domain.

Our study attempts to address the above gaps in the literature. We demonstrated how legal technicalities, while often written off as mundane and unworthy of attention, were deployed to harmonize the norms, actors and processes of each regime in responding to the international spread of disease via air travel. This work therefore builds upon an emerging scholarship inspired by the work of Annelise Riles¹⁵⁸ and Mariana Valverde¹⁵⁹ which has shown how mundane legal tools exert their own agency, thereby making them worthy of greater attention.¹⁶⁰ Far from inert, they ought to be factored in when considering the international response to an outbreak or other complex multi-sectoral concerns. Our exposition of the technical in securing coherent and synergistic regime interactions further contributes to the growing literature on relational regime interactions.

From the foregoing analysis, we wish to draw five significant conclusions. The first is the idea that efforts to respond to Ebola and, indeed infectious disease more generally, by necessity implicate ‘the legal.’ It is present in how disease is measured, monitored and addressed. In the context of our study, such legal work included the operation of legal technicalities and deployment of objects to facilitate the inter-operation of the IHR

¹⁵⁷ See, for example, WHO, *supra* note 38, 12.

¹⁵⁸ See generally Riles, *supra* note 19, at 973.

¹⁵⁹ Valverde, *supra* note 20, at 139.

¹⁶⁰ Cloatre, *supra* note 21, at 97.

(2005) and the Chicago Convention. While the two regimes contained different rationalities, the creation of coordination linkages helped to resolve their functional overlap as well as mediating the participation of the private sector. Through this arrangement, the ensuing production of *legal* practices and objects contributed to the adaption of the aircraft to outbreaks.

Second, the adaptation of the aircraft to address the threat posed by communicable diseases is part of an on-going, complex modification of sanitary frontiers. We demonstrated how the production of the Traveller Public Health Declaration Form and specialised kits brought the private sector more firmly into the fold of bordering processes and the surveillance regime underpinning global health security. They were now engaged directly in the separation and ‘social sorting’¹⁶¹ of the sick from the healthy between national frontiers. This assimilation also has the effect of instrumentalising aircrew and the aircraft as tools of disease surveillance.

Third, the adaptations that occurred post-SARS did not flow from a single international legal regime or from a plurality of legal regimes with a clear hierarchy. Rather, hierarchy was emergent; a function, among other things, of the hybrid space of CAPSCA which worked to bridge two specialised regimes of law. Our article fits within the wider international law literature on relational regime interactions and demonstrates how such interactions may not flow from a normative or singular hierarchical source. Rather, they may encompass a range of actors and norms within a highly plural legal space; a decentralized operative legality.¹⁶²

¹⁶¹ Barker, *supra* note 40, at 358.

¹⁶² In this vein, see M. A. Young, ‘Fragmentation or interaction: the WTO, fisheries subsidies, and international law’, (2009) 8 (4) *World Trade Review* 477; A. Fischer-Lescano and G. Teubner, *supra* note

This process ultimately came to be driven principally by the IHR. It was ordered by the norm of global health security with its attendant focus on surveillance and preparedness. In this context jurisdiction, that is, the question of which regime operates where and when, is compostable, contingent and not dependent on doctrinal legal hierarchy. Thus, in the context of the Ebola, when the private sector expressed reluctance to take on duties traditionally borne by departure and arrival states, we saw how the assemblage giving rise to jurisdiction could unravel.

Fourth, in our focus on legal technicalities, we found that tools really do matter¹⁶³ when it comes to regime interactions. Legal technicalities and artefacts were at the forefront of public health efforts at ensuring the mobility of international flights. The inclusion of additional public health procedures and forms as well as the Universal Precaution Kit - a box the size of a suitcase – were legally charged artefacts aimed at the lifting of restrictions on flights during the height of an outbreak. Thus, regime interactions and the legal technicalities they implicate are an overlooked but integral feature of global health governance. Our findings may have value for other areas of international law and help to revise theoretical accounts of how international legal regimes interface.¹⁶⁴

Fifth, we found that the aircraft is a site of legal contestation. Tensions were revealed between the intersections of legal systems. These were particularly prevalent when it came to the collection and handling of passenger data and were only partly resolved by the bridging work performed between the regimes. This reveals a legal plurality within the constitutive assemblage of global health security; a finding which has significant implications for the development of international responses to infectious disease.

62; L. Viellechner, 'Responsive legal pluralism: The emergence of transnational conflicts law', 6 (2) *Transnational Legal Theory* 312.

¹⁶³ In this vein, see Riles, *supra* note 16, at 986.

¹⁶⁴ In this vein, see Burchardt, *supra* note 65 and Dunoff, *supra* note 16.

While we have been able to draw a number of original and significant conclusions from our analysis, there are numerous areas ripe for further research. In particular, it is clear that more attention ought to be played to the legal techniques of regime interactions in response to complex multi-sectoral challenges.